MISSILE DEFENSE AGENCY
MDAfacts
Making Ballistic Missile Defense A Reality...

Block 2006 Development

The Missile Defense Agency(MDA) continues to pursue a robust research, development, test and evaluation program. We work to put defenses into the field in two-year blocks, with successive blocks more capable than earlier ones. Once tested, elements and components are available for limited procurement, transition to production, or for initial defensive operations as directed. These "off-ramps" may occur at any time during the Block Cycle to support timely execution of these transition or fielding decisions. This allows missile defense capabilities to get into the hands of our customer, the warfighter, at a faster rate than would otherwise be possible, while MDA continues future development.

Block 2006 continues developing existing capabilities and provides new capabilities that could be added to those fielded in Block 2004. For capabilities already tested or in use, the focus is on evolving and integrating capabilities to achieve an integrated and layered Ballistic Missile Defense System (BMDS). New capabilities focus on attaining a level of maturity such that these new capabilities may undergo comprehensive and operationally realistic system integration and testing in the Test Bed. By developing and integrating additional weapons, sensors, and Command, Control , Battle Management and Communications (C2BMC) tools, MDA demonstrates greater protection for the U.S., and its deployed forces, friends and allies. During Block 2006, MDA will add a new radar that can be deployed, at sea or on land, close to the threat; add initial space-based sensors; add Theater High Altitude Area Defense (THAAD) interceptors for layering against short and medium range threats; network these capabilities by focusing on a Command, Control, Battle Management and Communications (C2BMC) "backbone" for improved interoperability; and improve existing capabilities. Throughout this block, our test and validation efforts focus on integrated flight tests, with increased realism.

Boost Phase - Hardware and software improvements will be added to the Airborne Laser (ABL) System Integration Laboratory(SIL), a ground-based test platform, and the first Boeing 747-400 airframe and laser system delivered in Block 2004. Flight-testing and intercept capabilities will be expanded. Additionally, expanded ABL ground support equipment will make the aircraft more readily deployable. Block 2006 tests will pit the ABL against the full range of threats, and improve integration with other BMDS segments.

Midcourse Phase - Prototype hardware and software maturation of all GMD interceptor, sensor, and C2BMC components will be completed. Ground and flight-testing is expected to demonstrate added weapon and discrimination performance, and interface with external sensors. Aegis Ballistic Missile Defense (BMD) flight missions will include remote engagements of targets using tactical data links, demonstration of enhanced warhead seeker discrimination against limited target countermeasures, and surveillance against various targets including long-range strategic class targets. U.S cooperative research and development with the Japan Defense Agency will continue focusing on the enhancement of the SM-3.

Terminal Phase - THAAD flight-tests are scheduled to begin in the second quarter, FY06, and continue through first quarter, FY08, with a total of five flight tests. Interceptor endgame discrimination (both exoatmospheric and endoatmospheric) capability against increasingly complex targets will be improved.

Sensors - Two low-earth orbit satellites, equipped with infrared and visible sensors, will be launched in FY07 to validate space-based sensor concepts for target acquisition, tracking, and discrimination, and provide a space node for the BMDS Test Bed to support data fusion, radar/sensor cueing over-the-horizon, and interceptor handover and fire control.

BMDS Products - MDA provides enhanced Forward-Based Sensor capabilities for forward-based radars and passive optical sensors. The C2BMC Block 2006 will field additional combatant commander C2 suites, including collaborative planning. Sensor netting evolves to feature-aided discrimination and launch-on-remote capability.